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18092 (AT 20958-1033)
PATENT

IN THE CLAIMS:

1. (currently amended) An electrode assembly for a sensor catheter tip, said assembly comprising:

a first electrode and a second electrode, each electrode comprising a body having a center axis and a contact aperture radially spaced from the center axis, the electrodes being axially aligned and spaced apart along the axis; and

a first contact element and a second contact element positioned within each said contact aperture in the respective first electrode and second electrode, each of the first and second contact elements configured to receive a wire lead and establish electrical contact with the respective first and second electrodes;

wherein said first and second contact elements ~~corresponding to each of said first and second electrodes~~ are radially offset from one another, thereby providing staggered contact points for each respective electrode.

2. (currently amended) An electrode assembly in accordance with claim 1 wherein said first and second contact elements ~~of said first and second electrode~~ are offset approximately 90 degrees from one another.

3. (currently amended) An electrode assembly in accordance with claim 1 wherein each of said first and second electrodes further comprise a lead aperture ~~and a contact aperture~~ spaced from said contact aperture and also radially spaced from the center axis, said lead apertures of said first and second electrodes ~~are~~ being substantially aligned with one another.

4. (currently amended) An electrode assembly in accordance with claim 1 wherein each of said first and second electrodes comprise a disk ~~defined by multiple~~ having intersecting spokes defining substantially equal regions on each disk, said contact element positioned in one of said regions, the other of said regions comprising a lead aperture extending therethrough.

5. (original) An electrode assembly in accordance with claim 1 wherein said contact element comprises a tail portion configured for soldering.

6. (cancelled)

7. (original) An electrode assembly in accordance with claim 1 wherein said assembly further comprises a dielectric spacer element disposed between said first and second electrodes, said dielectric spacer element extending at least partially through one of said electrodes.

8. (original) An electrode assembly in accordance with claim 1 further comprising an injection molded dielectric spacer element positioned between said electrodes.

9. (original) An electrode assembly in accordance with claim 1 wherein each of said contact elements have an axial length, said axial length of said contacts different from one another.

10. (currently amended) A catheter tip assembly for an impedance spectroscopy system, said assembly comprising:

a rounded dielectric tip;

a first electrode disk adjacent said tip, said first electrode disk comprising a body having a contact aperture therethrough;

a second electrode disk axially spaced from said first electrode disk, said second electrode comprising a body having a contact aperture therethrough;

wherein said second electrode disk is rotated relative to said first electrode disk about a longitudinal axis so that said contact apertures are circumferentially offset from one another; and

first and second contact elements each adapted for press fit insertion into the respective first and second electrode disks on a first end and adapted to engage a lead wire on another end opposite the first end.

11. (original) A catheter tip assembly in accordance with claim 10 further comprising a third electrode disk and a fourth electrode disk, said third and fourth electrode disks substantially identical to said first and second electrode disks;

wherein each of said first, second, third and fourth electrode disks are circumferentially rotated relative to one another.

12. (currently amended) A catheter tip assembly in accordance with claim 10 further ~~comprising first and second contacts configured for electrical connection with wire leads~~ wherein each of the first and second electrode disks comprise a plurality of lead apertures spaced from the contact apertures in each respective disk, ~~each of said first and second contacts press fit into a respective one of said first and second contact apertures,~~ and one of said first and second ~~contacts~~ contact elements extending through ~~a lead~~ one of the lead apertures in one of said first and second electrode disks.

13. (currently amended) A catheter tip assembly in accordance with claim 10 ~~further comprising first and second contacts inserted through said first and second contact apertures,~~ each of said first and second ~~contacts having~~ contact elements have a different axial length.

14. (original) A catheter tip assembly in accordance with claim 10 further comprising a dielectric spacer element sandwiched between said first and second electrodes.

15. (currently amended) A catheter tip assembly in accordance with claim 10 further comprising a connector portion on an end of said ~~top assembly~~ tip assembly opposite said tip, and longitudinally extending contacts respectively coupled to said first and second electrode disks, each of said contacts terminated to a lead wire within said connector portion.

16. (original) A catheter tip assembly in accordance with claim 10 further comprising a coupler portion configured for attachment to a sump tube.

17-25. (cancelled)

26. (new) An electrode assembly in accordance with claim 1 wherein at least one of said first and second electrodes comprises a spoke, and said contact aperture being spaced from said spoke.

27. (new) An electrode assembly in accordance with claim 1 wherein said first and second electrodes are substantially identically formed.

28. (new) An electrode assembly in accordance with claim 1 wherein sat least one of said first and second disks comprise a center aperture, and a plurality of contact apertures substantially equally spaced around the central aperture.

29. (new) An electrode assembly in accordance with claim 1, further comprising a spacer element, and wherein at least one of said first and second electrodes comprises a positioning protrusion adapted to engage the spacer element.

30. (new) A catheter tip assembly in accordance with claim 10, wherein at least one of said first and second electrodes comprises a spoke, and said contact aperture being spaced from said spoke.

31. (new) A catheter tip assembly in accordance with claim 10, wherein sat least one of said first and second disks comprise a center aperture, and a plurality of contact apertures substantially equally spaced around the central aperture.

32. (new) A catheter tip assembly in accordance with claim 10, further comprising a spacer element, and wherein at least one of said first and second electrodes comprises a positioning protrusion adapted to engage the spacer element.